November 3, 2003

TO: Internal File

THRU: Daron R. Haddock, Permit Supervisor

FROM: James D. Smith, Environmental Scientist III/Hydrology

RE: Technical Field Visit, Deer Creek Waste Rock Storage Facility, PacifiCorp, Deer Creek Mine, C/015/0018

Other Attendees: Karl Housekeeper, UDOGM
Dennis Oakley, PacifiCorp

Date & Time: October 24, 2003; approximately 11:45 AM to 12:45 PM

PURPOSE:

Clarify the location and condition of sediment control measures at this locale, in particular the undisturbed drainage bypass ditch on the north side of the facility.

OBSERVATIONS:

(Photos are in M:\FILES\COAL\PERMITS\015\C0150018\IMAGES\10232003)

1. The undisturbed drainage bypass ditch, on the north and west sides of the Phase I waste rock pile (see MRP Plate 4-5), is completely filled with sediment from years of runoff from the undisturbed drainages north of the site (photo P0002131).

    a. The ditch was built when the site was constructed, around 1989.

b. The ditch was cleaned around 1991 (Dennis Oakley – personal communication, based on his conversations with other PacifiCorp personnel).

c. When Dennis started work with PacifiCorp in 1997, the ditch was buried in sediment to the point it was no longer evident there was a ditch.

d. Permit-boundary fencing from the original construction is half-buried in sediment where it crosses the drainages, and newer fencing has been installed on top of the sediment.

e. The ditch will be cleaned to comply with the MRP.

2. There is a berm made of topsoil on the north, west, and south sides of the waste pile.

   a. The outslope of the topsoil berm is an ASCA (see Plate 4-5 and photo P0002129).
      i. The plan isn't clear, but apparently silt fence located between the berm and ditch is the sediment control measure for this ASCA.
      ii. Without a functioning undisturbed drainage bypass ditch, the silt fence has been keeping sediment from the undisturbed areas out of the waste rock site rather than retaining sediment on the site.
         1. At several locations, the silt fence has been knocked-down or torn by water and sediment coming from the undisturbed side: this resulted in NOV #NO3-49-4-1.
         2. The silt fence will be repaired to abate the NOV.

   b. Even with the undisturbed bypass ditch full of sediment and the silt fence in disrepair; the topsoil berm isolates the coal mine waste from the undisturbed water and sediment.

   c. On the north side, the berm, silt fence, and presumably the ditch extend east beyond the waste rock pile.
      i. This section of the berm is considerably lower than that adjacent to the waste rock (photo P0002135.)
      ii. In this section extending to the east, the berm has been topped by undisturbed runoff, the top of the berm has been eroded and sections of silt fence flattened (photo P0002133.)
      iii. After crossing the berm, undisturbed runoff flows across the disturbed area east of the waste pile and to the existing drainage channel on the south side.
      iv. Cleaning the undisturbed bypass ditch should eliminate the problem of undisturbed drainage flowing across this berm and the adjacent disturbed area.

3. Most of the waste rock pile drains to a sedimentation pond, but the east side of the waste rock pile is designated as a BTCA area (see Plate 4-5 and photo P0002133.)

    a. Silt fencing is the sediment control measure for this BTCA area (page 4-13.1 of the MRP).

    b. The toe of the BTCA area butts against a parallel ridge, which has produced a southward draining channel or ditch between the BTCA area and ridge.
        i. This ditch directs drainage from the BTCA area to the existing drainage channel on the south side of the site.
        ii. Silt fencing in this ditch has been removed, although the roof-bolt supports are still in place.
        iii. This ditch is also where part of the undisturbed flow over the east end of the topsoil berm (see 3.b.) reports, and silt fence across the head of the ditch treats this flow.

    c. The east end of the pile and the area east of the pile are not readily ground-truthed with what is shown on Plate 4-5.
        i. Topography appears to have been pretty much ignored when this pre-construction plan was drawn.
        ii. The waste rock pile may not have been built as far east as Plate 4-5 shows, which would at least partially explain:
            1. Why the berm and ditch on the north side extend so far beyond the east end of the pile, and
            2. Why features actually seen on the ground don't correlate well with features on the map.

RECOMMENDATIONS/CONCLUSIONS:

The Permittee is repairing the silt fence and cleaning the undisturbed drainage bypass ditch on the north and west side of the waste pile and restoring the sediment control measures for the BTCA area on the east end of the waste pile.

I'd recommend the Permittee make an as-built drawing of the site. At a minimum, the corners of the pile and a few other prominent features should be GPS'd to see how everything sits in relation to the pre-construction plan.

Attachments
cc: All Attendees
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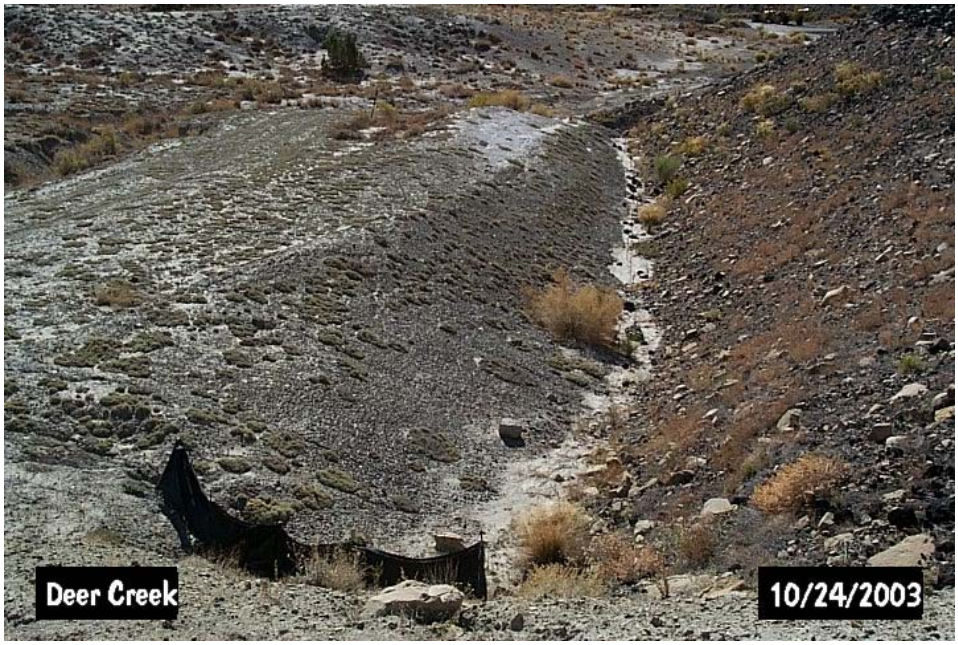
P0002129 Looking northeast along the berm, where the silt fence has been overwhelmed by sediment from outside the disturbed area. The undisturbed bypass ditch is completely filled with sediment.



P0002131 "Ditch" between the disturbed area and the BTCA area on the east end of waste pile.

P0002133 Undisturbed flow overruns the silt fence and erodes the topsoil berm east of the waste pile.

P0002135 East toe of the waste pile. Roof bolts and silt fence cut flush to the surface indicate where the silt fence was located. Berm in the background crosses an undisturbed drainage (see P0002133.)